

Form PTO 1449 Rev. 7-80	U.S. Department of Commerce Patent and Trademark Office <b>LIST OF PRIOR ART CITED BY APPLICANT</b> (Use Several Sheets If Necessary)	Atty. Docket No. Mo-6712/LeA-34,285	Serial No. 10/019,996
		Applicant Matthias Beller et al	
		Filing Date 10/19/01	Group 628

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA	2,769,824	11/06/56	Schneider et al	260	937.45	
AB	*3,317,592	05/02/67	MacLean et al	260	533	
AC	4,496,779	01/29/85	Myers et al	568	860	
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
						Yes No*
AL	1,028,940	05/11/66	Great Britain			
AM	93/17150	09/02/93	World Patent			
AN	0077201	04/20/83	Europe			
AO						
AP						

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	✓	Asymmetric Dehydroxylation Reactions (month unavailable) 1996, pages 1009-1024, Diols via Catalytic Dihydroxylation, Matthias Beller, K. Barry Sharpless.
AS	✓	Chem. Rev. (month unavailable) 1994, 94, pages 2483-2547, Catalytic Asymmetric Dihydroxylation, Hartmuth C. Kolb, Michael S. VanNieuwenhize, and K. Barry Sharpless.
AT	✓	Synthesis, (month unavailable) 1984, pages 85-127, $\alpha$ -Amidoalkylation at Carbon: Recent Advances - Part I, Harold E. Zaugg.
EXAMINER	DATE CONSIDERED	
EXAMINER Initial if referenced considered, whether or not citation is in conformance with MPEP 609: Draw line through if not in conformance and not considered. Include copy of this form with next communication to applicant.		

Form PTO 1449 Rev. 7-80	U.S. Department of Commerce Patent and Trademark Office <b>LIST OF PRIOR ART CITED BY APPLICANT</b> (Use Several Sheets If Necessary)	Atty. Docket No. Mo-6712/LeA-34,285	Serial No. 10/019,996
		Applicant Matthias Beller et al	
		Filing Date 10/19/01	Group 1623

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA	AB					
	AC					
	AD					
	AE					
	AF					
	AG					
	AH					
	AI					
	AJ					
	AK					

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						Yes	No*
AL							
AM							
AN							
AO							
AP							

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	Tetrahedron Letters No. 48, pp 4907-4908, (month unavailable) 1972, An Improved Procedure for the $\text{KMnO}_4$ Oxidation of Olefins to C1S-1,2-Glycols by use of Phase Transfer Catalysis, William P. Weber and James Peter Shepherd.
AS	J. Org. Chem. (month unavailable) 1997, 62, 2453-2457, A Concise and Convenient Synthesis of DL-proto-Quercitol and DL-gala-Quercitol via Ene Reaction of Singlet Oxygen Combined with [2+4] Cycloaddition to Cyclohexadiene, Emine Salamci, Hasan Secen, Yasar Sütbeyaz, and Metin Balci.
AT	Liebigs Ann/Recueil (month unavailable) 1997, pages 1029-1034, New Synthesis of 28-Homobrassinolide from Stigmasterol, Braja G. Hazra, Tirunahari Pavan Kumar, and Padmakar L. Joshi.
EXAMINER	DATE CONSIDERED
EXAMINER Initial if referenced considered, whether or not citation is in conformance with MPEP 609. Draw line through if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Form PTO 1449 Rev. 7-80	U.S. Department of Commerce Patent and Trademark Office <b>LIST OF PRIOR ART CITED BY APPLICANT</b> (Use Several Sheets if Necessary)	Atty. Docket No. Mo-6712/LeA-34,285	Serial No. 10/019,996
		Applicant Matthias Beller et al	
		Filing Date 10/19/01	Group 1623

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							Yes	No*
	AL							
	AM							
	AN							
	AO							
	AP							

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	J. Chem. Research (S). (month unavailable) 1996 pages 400-401, Ruthenium Tetraoxide Oxidation of Alkenes. Part 7. A more Complete Picture, Laura Albarella, Vincenzo Picciali, Dian Smaldone and Donato Sica.
AS	Chem. Eur. J. (month unavailable) 1996, 2, No.1, pages 50-57, Ruthenium-Catalyzed cis-Dihydroxylation of Alkenes: Scope and Limitations, Tony K. M. Shing, Eric K. W. Tam, Vincent W.-F. Tai, Ivan H. F. Chung, and Qin Jiang.
AT	Bull Chem. Soc. Jpn., 70, pages 2535-2540 (month unavailable) (1997) A Chemo-Enzymatic Synthesis of D-Allosamine Derivatives from Tri-O-acetyl- D-glucal, Takeshi Sugai, Hanako Okazaki, Atsunobu Kuboki, and Hiromichi Ohta.
EXAMINER	DATE CONSIDERED
EXAMINER Initial if referenced considered, whether or not citation is in conformance with MPEP 609: Draw line through if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Form PTO 1449 Rev. 7-80	U.S. Department of Commerce Patent and Trademark Office <b>LIST OF PRIOR ART CITED BY APPLICANT</b> (Use Several Sheets if Necessary)	Atty. Docket No. Mo-6712/LeA-34,285	Serial No. 10/019,996
		Applicant Matthias Beller et al	
		Filing Date 10/19/01	Group 1623

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

APR 19 2002

RECEIVED

APR 23 2002

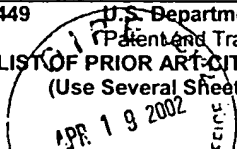
TECH CENTER 1600/2900

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							Yes	No*
	AL							
	AM							
	AN							
	AO							
	AP							

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	Synlett (month unavailable) 1995, pages 1014-1016, Synthesis and cis-Dihydroxylation of 6H-1,2-Oxazines Synthesis of Dihydroxyprolinols, Jörg Angermann, Kai Homann, Hans-Ulrich Reissig, Reinhold Zimmer.
AS	Carbohydrate Research 304 (month unavailable) (1997) pages 39-42, A practical multigram-scale synthesis of allo-inositol, Michel Desjardins, Larry E. Brammer Jr., Thomas Hudlicky.
AT	Tetrahedron 54 (month unavailable) (1998) pages 6605-6626, Syntheses of Novel Hydroxylamine Carbanucleosides, Mark J. Mulvihill and Marvin J. Miller.
EXAMINER	DATE CONSIDERED
EXAMINER Initial if referenced considered, whether or not citation is in conformance with MPEP 609: Draw line through if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Form PTO 1449 Rev. 7-80	U.S. Department of Commerce Patent and Trademark Office <b>LIST OF PRIOR ART CITED BY APPLICANT</b> (Use Several Sheets If Necessary)	Atty. Docket No. Mo-6712/LeA-34,285	Serial No. 10/019,996
		Applicant Matthias Beller et al	
		Filing Date 10/19/01	Group 1623

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA					
	AB					
	AC					
	AD					
	AE					
	AF					
	AG					
	AH					
	AI					
	AJ					
	AK					

**RECEIVED**  
APR 23 2002  
TECH CENTER 1600/2900

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						Yes	No*
AL							
AM							
AN							
AO							
AP							

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	Chem. Ber (month unavailable) (1908), 45, O. Makowka: Zur Kenntnis des Osmiums, pages 943-944	NO TRANSLATION
AS	Leebigs Ann. Chem. (month unavailable) 1936, 522, pages 75-96, Osmiumsäure-ester als Zwischenprodukte bei Oxydationen; von Rudolf Criegee.	NO TRANSLATION
AT	Angewandte Chemie, 50. Jahrgang, Nr. 8, Seiten pages 153-155, 20. February 1937, Die Oxydative Spaltung der C-C-Bindung, von Dr. habil. Rudolf Criegee.	NO TRANSLATION
EXAMINER	DATE CONSIDERED	
<p>EXAMINER Initial if referenced considered, whether or not citation is in conformance with MPEP 609: Draw line-through if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>		

Form PTO 1449 Rev. 7-80	U.S. Department of Commerce Patent and Trademark Office <b>LIST OF PRIOR ART CITED BY APPLICANT</b> (Use Several Sheets If Necessary)	Atty. Docket No. Mo-6712/LeA-34,285	Serial No. 10/019,996
		Applicant Matthias Beller et al	
		Filing Date 10/19/01	Group 1623

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA					
	AB					
	AC					
	AD					
	AE					
	AF					
	AG					
	AH					
	AI					
	AJ					
	AK					

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						Yes	No*
AL							
AM							
AN							
AO							
AP							

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	Chem. Ber. (month unavailable) 1912, pages 3329-3337, Mitteilungen, K. A. Hofmann: Sauerstoff-Übertragung durch Osmiumtetroxyd und Aktivierung von Chlorat_Lösungen.
AS	J. AM. Chem. Soc. Vol. 81, (month unavailable) 1959, pages 4730-4733, A Study of the Hydroxylation of Olefins and the Reaction of Osmium Tetroxide with 1,2-Glycols, Nicholas A. Milas, Joseph H. Trepagnier, John T. Nolan, Jr., and Miltiadis I. Iliopoulos.
AT	J. AM. Chem. Soc. March 1976-98, pages 1986-1987, Osmium Catalyzed Vicinal Hydroxylation of Olefins by tert-Butyl Hydroperoxide under Alkaline Conditions, K. Barry Sharpless, Kageyasu Akashi.

EXAMINER

DATE CONSIDERED

EXAMINER Initial if referenced considered, whether or not citation is in conformance with MPEP 609: Draw line through if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO 1449 Rev. 7-80 <b>U.S. Department of Commerce Patent and Trademark Office</b> <b>LIST OF PRIOR ART CITED BY APPLICANT</b> (Use Several Sheets If Necessary) APR 19 2002	Atty. Docket No. Mo-6712/LeA-34,285	Serial No. 10/019,996
	Applicant Matthias Beller et al	
	Filing Date 10/19/01	Group 1623

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILED DATE IF APPROPRIATE
	AA					
	AB					
	AC					
	AD					
	AE					
	AF					
	AG					
	AH					
	AI					
	AJ					
	AK					

RECEIVED  
APR 23 2002  
TECH CENTER 1600/2900

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						Yes	No*
	AL						
	AM						
	AN						
	AO						
	AP						

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	J. Org. Chem. (month unavailable) 1981, 46, pages 3936-3938, A greatly Improved Procedure for Ruthenium Tetroxide Catalyzed Oxidations of Organic Compounds, Per H. J. Carlsen, Tsutomu Katsuki Victor S. Martin, K. Barry Sharpless.
AS	J. Org. Chem. (month unavailable) 1987, 52, pages 689-691, Synthesis of Diacids and Keto Acids by Ruthenium Tetroxide Catalyzed Oxidation of Cyclic Allylic Alcohols and $\alpha,\beta$ -Unsaturated Ketones, Francis X. Webster, Jose Rivas-Enterrios, and Robert M. Silverstein.
AT	Tetrahedron Letters, Vol. 29, No. 22, pages 2701-2702, (month unavailable) 1988. Easy and General Method to Synthesize Chiral 2-Hydroxyacid Benzoates, V.S. Martin, M.T. Nunez and C.E. Tonn.
EXAMINER	DATE CONSIDERED
EXAMINER Initial if referenced considered, whether or not citation is in conformance with MPEP 609. Draw line through if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Form PTO 1449 Rev. 7-80	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. Mo-6712/LeA-34,285	Serial No. 10/019,996
LIST OF PRIOR ART CITED BY APPLICANT (Use Several Sheets If Necessary)		Applicant Matthias Beller et al	
		Filing Date 10/19/01	Group 1643

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	DATE IF APPRO- PRIATE
	AA					
	AB					
	AC					
	AD					
	AE					
	AF					
	AG					
	AH					
	AI					
	AJ					
	AK					

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						Yes	No*
	AL						
	AM						
	AN						
	AO						
	AP						

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	J. Org. Chem. (month unavailable) 1988, 53, pages 5185-5187, Regioselective Azide Opening of 2,3-Epoxy Alcohols by $[Ti(O-i-Pr)_2(N_3)_2]$ : Synthesis of $\alpha$ -Amino Acids, Maurice Caron, Paul R. Carlier, K. Barry Sharpless.
AS	Tetrahedron Letters No. 23, pp 1973-1976, (month unavailable) 1976, An improved Catalytic $OsO_4$ Oxidation of Olefins to CIS-1,2-Glycols Using Tertiary Amine Oxides as the Oxidant, V. VanRheenen, R. C. Kelly and D. Y. Cha.
AT	Tetrahedron Letters Vol. 54, pp 449-450 (month unavailable) 1980, Osmium Tetroxide Catalyzed Hydroxylation of Hindered Olefins, Rahul Ray and Donald S. Matteson.
EXAMINER	DATE CONSIDERED
EXAMINER Initial if referenced considered, whether or not citation is in conformance with MPEP 609: Draw line through if not in conformance and not considered. Include copy of this form with next communication to applicant.	



Form PTO 1449 Rev. 7-80	U.S. Department of Commerce Patent and Trademark Office <b>LIST OF PRIOR ART CITED BY APPLICANT</b> (Use Several Sheets If Necessary)	Atty. Docket No. Mo-6712/LeA-34,285	Serial No. 10/019,996
APR 19 2002		Applicant Matthias Beller et al	Filing Date 10/19/01
		Group 1623	

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA					
	AB					
	AC					
	AD					
	AE					
	AF					
	AG					
	AH					
	AI					
	AJ					
	AK					

RECEIVED

APR 23 2002

TECH CENTER 1600/2900

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						Yes	No*
	AL						
	AM						
	AN						
	AO						
	AP						

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	J. Org. Chem. (month unavailable) 1990, 55, pages 766-768, Osmium Tetraoxide Catalyzed Vicinal Hydroxylation of Higher Olefins by Using Hexacyanoferrate (III) Ion as a Cooxidant, Makoto Minato, Keiji Yamamoto, and Jiro Tsuji.
AS	Indian Journal of Chemistry, Vol. 13, February 1975, pp 112-115, Kinetics & Mechanism of Osmium Tetroxide Catalyzed Oxidation of Maleate & Fumarate Ions with Alkaline Ferricyanide, M. P. Singh, H. S. Singh, B. S. Arya, A. K. Singh & A. K. Sisodia.
AT	Tetrahedron Letters, Vol. 32, No. 32, pages 3965-3968, (month unavailable) 1991, On the Timing of Hydrolysis / Reoxidation in the Osmium-catalyzed Asymmetric Dihydroxylation of Olefins Using Potassium Ferricyanide as The Reoxidant, Yasukazu Ogino, Hou Chen, Hoi-Lun Kwong, and K. Barry Sharpless.
EXAMINER	DATE CONSIDERED
EXAMINER Initial if referenced considered, whether or not citation is in conformance with MPEP 609: Draw line through if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Form PTO 1449  
Rev. 7-80U.S. Department of Commerce  
Patent and Trademark Office  
**LIST OF PRIOR ART CITED BY APPLICANT**  
(Use Several Sheets If Necessary)Atty. Docket No.  
Mo-6712/LeA-34,285Serial No.  
10/019,996Applicant  
Matthias Beller et alFiling Date  
10/19/01Group  
1623

APR 19 2002

## U.S. PATENT DOCUMENTS

EXAMINER INITIALS	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA					
	AB					
	AC					
	AD					
	AE					
	AF					
	AG					
	AH					
	AI					
	AJ					
	AK					

RECEIVED

APR 23 2002

TECH CENTER 1600/2900

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						Yes	No*
	AL						
	AM						
	AN						
	AO						
	AP						

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	Chem. Eng. News, (month unavailable) 1994, 72(24) page 41, Science/Technology Concentrates.
AS	J. Chem. Soc. (C), (month unavailable) 1968, pages 640-641, Osmium Tetroxide-catalysed Oxidation of Olefins, J.F. Cairns and H.L. Roberts.
AT	Catalysis of Organic Reactions (Papers from the 10 <sup>th</sup> Conference on the Catalysis of Org. Reactions), (month unavailable) 1985 pages 269-280, Industrial Uses of Catalytic Oxidation and the Direct Oxidation of Olefins to Glycols, R.G. Austin, R.C. Michaelson and R.S. Myers.

EXAMINER

DATE CONSIDERED

EXAMINER Initial if referenced considered, whether or not citation is in conformance with MPEP 609: Draw line through if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO 1449 Rev. 7-80	U.S. Department of Commerce Patent and Trademark Office <b>LIST OF PRIOR ART CITED BY APPLICANT</b> (Use Several Sheets If Necessary)	Atty. Docket No. Mo-6712-LeA-34,285	Serial No. 10/019,996
APR 19 2002		Applicant Matthias Beller et al	
		Filing Date 10/19/01	Group 1623

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA					
	AB					
	AC					
	AD					
	AE					
	AF					
	AG					
	AH					
	AI					
	AJ					
	AK					

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						Yes	No*
	AL						
	AM						
	AN						
	AO						
	AP						

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	*T. Barow, et al.: "Arylation of guanosine with para-substituted styrene oxides" Chemical Research in Toxicology, Bd. 11, Nr. 1, Januar 1998 (1998-01), Seiten 44-53, XP000929704 American Chemical Society, Washington, DC. US11 Seite 45, linke Spalte.
AS	
AT	
EXAMINER	DATE CONSIDERED

EXAMINER Initial If referenced considered, whether or not citation is in conformance with MPEP 609: Draw line through if not in conformance and not considered. Include copy of this form with next communication to applicant.

\* Neither English Language Equivalent nor an English Language Translation is available.